

-1- (Amended)

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5 A composition for protecting cultivated plants comprising:

(a) at least one herbicide; and

(b) repellent adjuvant selected from the group consisting of silane, silicone, siliconate and mixtures thereof which are organic for modifying surface properties of the composition so that retention of the composition on foliage of the cultivated plant is reduced.

-4- (Amended)

B2
5 The composition of Claim 3 wherein the safener is selected from the group consisting of 4-(dichloroacetyl)-1-oxo-4-azaspiro-(4,5)-decane, 2,2-dichloro-N,N-di-2-propenylacetamide, 3-dichloroacetyl-5-(2-furanyl)-2,2-dimethyl-oxazolidine, 2,2,5-trimethyl-N-dichloroacetyloxazolidine, 2,2-dimethyl-5-phenyl-N-dichloroacetyl oxazolidine, N,N-diallyl-2,2-dichloroacetamide, 2,2-dimethyl-5(2-furanyl)-N-dichloroacetyl oxazolidine, 2,2-dimethyl-5(2-thienyl)-N-dichloroacetyl oxazolidine, 2,2-spirocyclohexy-N-dichloroacetyl oxazolidine, 4-(dichloroacetyl)-3,4-dihydro-3-methyl-2H-1,4-benzoxazine, 3-[3-(dichloroacetyl)-2,2-dimethyl-5-oxalidinyl]pyridine, 4-(dichloroacetyl)-1-oxa-4-azaspiro-(4,5)-decane, 2,2-dichloro-1-(1,2,3,4-tetrahydro-1-methyl-2-isoquinolyl)ethanone, cis/trans-1,4-bis(dichloroacetyl)-
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2,5-dimethylpiperazine, N-(dichloroacetyl)-1,2,3,4-
tetrahydroquinaldine, 1,5-bis(dichloroacetyl)-1,5-
diazacyclononane, 1-(dichloroacetyl)-1-
azaspiro[4,4]nonane, and combinations thereof.

-12- (Amended)

B3

The method of Claim 1 wherein the repellent adjuvant is an aqueous solution of sodium methyl siliconate.

-18- (Amended)

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The composition of Claim 17 wherein the safener is selected from the group consisting of benoxacor, flurilazole, dichlormid and 4-(dichloroacetyl)-1-oxo-4-azaspiro-(4,5)-decane.

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A method for protecting crop plants without injuring crop plants, the steps comprising:

5 (a) providing a herbicidal formulation comprising at least one herbicide admixed with a repellent adjuvant selected from the group consisting of silane, silicone, silicate and mixtures thereof which are organic wherein the repellent adjuvant modifies surface properties of the formulation thereby reducing retention of the formulation on foliage of crop plants; and

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(b) applying the formulation to the crop plants wherein the formulation bounces off the foliage onto the soil wherein the formulation protects the crop plants without injuring the crop plants.

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A method for inhibiting a weed without injuring turfgrass, the steps comprising:

(a) providing a liquid dispersion of a herbicidal formulation comprising at least one herbicide admixed with a repellent adjuvant which is an organosiliconate wherein the repellent adjuvant modifies surface properties of the formulation thereby reducing retention of the formulation on foliage of the turfgrass; and

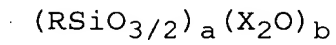
(b) applying the formulation to the turfgrass wherein the formulation bounces off the foliage onto the soil wherein the formulation inhibits growth of the weed.

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The method of Claim 27 wherein the safener
is selected from the group consisting of 4-
(dichloroacetyl)-1-oxo-4-azaspiro-(4,5)-decane, 2,2-
dichloro-N,N-di-2-propenylacetamide, 3-dichloroacetyl-5-
5 (2-furanyl)-2,2-dimethyl-oxazolidine, 2,2,5-trimethyl-N-
dichloroacetyloxazolidine, 2,2-dimethyl-5-phenyl-N-
dichloroacetyl oxazolidine, N,N-diallyl-2,2-
dichloroacetamide, 2,2-dimethyl-5(2-furanyl)-N-
dichloroacetyl oxazolidine, 2,2-dimethyl-5(2-thienyl)-N-
10 dichloroacetyl oxazolidine, 2,2-spirocyclohexy-N-
dichloroacetyl oxazolidine, 4-(dichloroacetyl)-3,4-
dihydro-3-methyl-2H-1,4-benzoxazine, 3-[3-
(dichloroacetyl)-2,2-dimethyl-5-oxalidiny]pyridine, 4-
(dichloroacetyl)-1-oxa-4-azaspiro-(4,5)-decane, 2,2-
15 dichloro-1-(1,2,3,4-tetrahydro-1-methyl-2-
isoquinolyl)ethanone, cis/trans-1,4-bis(dichloroacetyl)-
2,5-dimethylpiperazine, N-(dichloroacetyl)-1,2,3,4-
tetrahydroquinaldine, 1,5-bis(dichloroacetyl)-1,5-
diazacyclononane, 1-(dichloroacetyl)-1-
20 azaspiro[4,4]nonane, and combinations thereof.

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The method of Claim 25 wherein the repellent adjuvant is an aqueous solution of an organosiliconate which has the formula

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wherein X denotes sodium or potassium, and R is methyl, ethyl, or propyl, and the ratio of Si:X is about 1:1.

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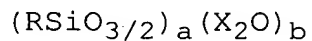
A method for applying one or more postemergence herbicides for controlling weeds to a crop plant without injuring the crop plant, the steps comprising:

5 (a) providing a composition comprising at least one herbicide admixed with a repellent adjuvant which is an organosiliconate wherein the repellent adjuvant modifies surface properties of the formulation thereby reducing retention of the formulation on foliage
10 of crop plants; and

(b) applying the formulation to the plants wherein the formulation bounces off the foliage onto the soil wherein the formulation controls the weeds without injuring the crop plant.

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The method of Claim 45 wherein the repellent adjuvant is an aqueous solution of the organosiliconate which has the formula

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wherein X denotes sodium or potassium, and R is methyl, ethyl, or propyl, and the ratio of Si:X is about 1:1.

B7

The method of Claim 55 wherein the safener is selected from the group consisting of 4-(dichloroacetyl)-1-oxo-4-azaspiro-(4,5)-decane, 2,2-dichloro-N,N-di-2-propenylacetamide, 3-dichloroacetyl-5-(2-furanyl)-2,2-dimethyl-oxazolidine, 2,2,5-trimethyl-N-dichloroacetyl oxazolidine, 2,2-dimethyl-5-phenyl-N-dichloroacetyl oxazolidine, N,N-diallyl-2,2-dichloroacetamide, 2,2-dimethyl-5(2-furanyl)-N-dichloroacetyl oxazolidine, 2,2-dimethyl-5(2-thienyl)-N-dichloroacetyl oxazolidine, 2,2-spirocyclohexy-N-dichloroacetyl oxazolidine, 4-(dichloroacetyl)-3,4-dihydro-3-methyl-2H-1,4-benzoxazine, 3-[3-(dichloroacetyl)-2,2-dimethyl-5-oxalidiny]pyridine, 4-(dichloroacetyl)-1-oxa-4-azaspiro-(4,5)-decane, 2,2-dichloro-1-(1,2,3,4-tetrahydro-1-methyl-2-isoquinolyl)ethanone, cis/trans-1,4-bis(dichloroacetyl)-2,5-dimethylpiperazine, N-(dichloroacetyl)-1,2,3,4-tetrahydroquinoline, 1,5-bis(dichloroacetyl)-1,5-diazacyclononane, 1-(dichloroacetyl)-1-azaspiro[4,4]nonane, and combinations thereof.

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A composition for protecting cultivated plants comprising:

(a) an acetochlor herbicide;

(b) a safener selected from the group consisting of 4-(dichloroacetyl)-1-oxo-4-azaspiro-(4,5)-decane, 2,2-dichloro-N,N-di-2-propenylacetamide, 3-dichloroacetyl-5-(2-furanyl)-2,2-dimethyl-oxazolidine, 2,2,5-trimethyl-N-dichloroacetyloxazolidine, 2,2-dimethyl-5-phenyl-N-dichloroacetyl oxazolidine, N,N-diallyl-2,2-dichloroacetamide, 2,2-dimethyl-5(2-furanyl)-N-dichloroacetyl oxazolidine, 2,2-dimethyl-5(2-thienyl)-N-dichloroacetyl oxazolidine, 2,2-spirocyclohexy-N-dichloroacetyl oxazolidine, 4-(dichloroacetyl)-3,4-dihydro-3-methyl-2H-1,4-benzoxazine, 3-[3-(dichloroacetyl)-2,2-dimethyl-5-oxalidiny]pyridine, 4-(dichloroacetyl)-1-oxa-4-azaspiro-(4,5)-decane, 2,2-dichloro-1-(1,2,3,4-tetrahydro-1-methyl-2-isoquinolyl)ethanone, cis/trans-1,4-bis(dichloroacetyl)-2,5-dimethylpiperazine, N-(dichloroacetyl)-1,2,3,4-tetrahydroquinoline, 1,5-bis(dichloroacetyl)-1,5-diazacyclononane, 1-(dichloroacetyl)-1-azaspiro[4,4]nonane, and combinations thereof; and

(c) a repellent adjuvant which is an organosiliconate for modifying surface properties of the composition so that retention of the composition on foliage of the cultivated plant is reduced.

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A composition for protecting cultivated plants comprising:

(a) one or more of a herbicide selected from the group consisting of nicosulfuron, glyphosphate, glyphosphate, primisulfuron, chlorimuron, glufosinate-ammonium salt, linuron, linuron and chlorimuron ethyl, thifensulfuron, imazethapyr, imazaquin, acetochlor, alachlor, S-ethyldipropylthiocarbonate, isoxaflutole, flufenacet, metalachlor, and combinations thereof; and

10 (b) a repellent adjuvant which is an organosiliconate for modifying surface properties of the composition so that retention of the composition on foliage of the cultivated plant is reduced.

B8

The composition of Claim 59 wherein the
safener is selected from the group consisting of 4-
(dichloroacetyl)-1-oxo-4-azaspiro-(4,5)-decane, 2,2-
dichloro-N,N-di-2-propenylacetamide, 3-dichloroacetyl-5-
5 (2-furanyl)-2,2-dimethyl-oxazolidine, 2,2,5-trimethyl-N-
dichloroacetyloxazolidine, 2,2-dimethyl-5-phenyl-N-
dichloroacetyl oxazolidine, N,N-diallyl-2,2-
dichloroacetamide, 2,2-dimethyl-5(2-furanyl)-N-
dichloroacetyl oxazolidine, 2,2-dimethyl-5(2-thienyl)-N-
10 dichloroacetyl oxazolidine, 2,2-spirocyclohexy-N-
dichloroacetyl oxazolidine, 4-(dichloroacetyl)-3,4-
dihydro-3-methyl-2H-1,4-benzoxazine, 3-[3-
(dichloroacetyl)-2,2-dimethyl-5-oxalidinyl]pyridine, 4-
(dichloroacetyl)-1-oxa-4-azaspiro-(4,5)-decane, 2,2-
15 dichloro-1-(1,2,3,4-tetrahydro-1-methyl-2-
isoquinolyl)ethanone, cis/trans-1,4-bis(dichloroacetyl)-
2,5-dimethylpiperazine, N-(dichloroacetyl)-1,2,3,4-
tetrahydroquinaldine, 1,5-bis(dichloroacetyl)-1,5-
diazacyclononane, 1-(dichloroacetyl)-1-
20 azaspiro[4,4]nonane, and combinations thereof.

-61- (Amended)

B8
Cont

A composition for protecting cultivated plants comprising:

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- (a) a herbicide which is isooxaflutole;
 - (b) a safener which is 2,2,5-trimethyl-N-dichloro-acetyloxazolidine; and
 - (c) a repellent adjuvant which is an organosiliconate for modifying surface properties of the composition so that retention of the composition on foliage of the cultivated plant is reduced.

-62- (Amended)

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A composition for protecting cultivated plants comprising:

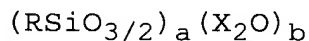
- 5
- (a) a herbicide which is halosulfuron;
 - (b) a safener which is 3-dichloroacetyl-5-(2-furanyl)-2,2-dimethyloxazolidine; and
 - (b) a repellent adjuvant which is an organosiliconate for modifying surface properties of the composition so that retention of the composition on foliage of the cultivated plant is reduced.

-63- (Amended)

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The composition of any one of Claims 57, 58, 59, 60, 61, or 62 wherein the repellent adjuvant is an aqueous solution of the organosiliconate which has the formula

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wherein X denotes sodium or potassium, and R is methyl, ethyl, or propyl, and the ratio of Si:X is about 1:1.

REMARKS

Claims 1-7, 12-18, 20-31, 36-44 and 53-65 are pending. The claims have been amended to cover "silanes, silicones and siliconates" and in particular "organosiliconates" (RSiOOX). The latter compounds are repellent adjuvants not covered by the claims of the parent application. The spelling of "repellent" in the specification has been corrected.

Favorable consideration is requested.

Respectfully,



Ian C. McLeod
Registration No. 20,931

2190 Commons Parkway
Okemos, Michigan 48864
(517) 347-4100
Fax: (517) 347-4103